NEW SPECIES OF PERITYLE AND AMAURIA (COMPOSITAE)

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Recent systematic studies of *Perityle* sect. *Perityle* and *Amauria* have disclosed two undescribed Mexican species. Taxonomic treatments of both genera are nearing completion, and it is convenient to publish the novelties at this time in order to facilitate later reference to the taxa.

Perityle turneri Powell, sp. nov. Plantae perennes herbaceae vel sufruticosae diffusae vel decumbentes vel pendulae vel semi-erectae; caules 20–45 cm longi saepe purpurascentes inferiores saepe ad nodos radicantes superiores puberuli vel subtomentosi; folia plerumque opposita ovata vel deltoidea 3–4.5 (–8.5) cm longa 1.5–3 (–4) cm lata puberula vel subtomentosa saepe purpurascentia apice acuta vel attenuata basi interdum subcordatis margine serrato vel serrato-crenato vel serrato-laciniato vel duplicato-serrato-laciniato; petioli 1–1.5 (–3) cm longi; capitula radiata 5–7 mm alta 7–14 mm lata solitaria vel in catervas 2–3 (–4) capitulatas aggregata; pedunculi (1–) 2–6 cm longi; involucrum hemisphaericum vel late campanulatum; receptaculum conicum; radii flores 12–18 ligulis oblongis (3–) 6–9 mm longis albis; disci corollae (1.8–) 2–2.8 (–3) mm longae flavae; achenia compressa 1.5–2 mm longa obovata vel oblongo-ovata superficiebus ad centrum puberulis marginibus ciliatis crassiuscule vel tenuiter callosis; pappus prominens coroniformis; pappi squamellae plures; pappi setae 2 raro solitariae inaequales seta longiore 0.6–1.5 longa; chromosomatum numerus **n = 17.**

TYPE. MEXICO: Durango: 3.4 mi E of El Palmito, 2 Apr 1970, *A. M. Powell 1858* (Holotype, TEX; Isotype, SRSC and to be distributed).

Specimens examined. MEXICO: Chihuahua: 4 mi SW of Villa Matamoros, *D. S. Correll & H. S. Gentry 22819* (LL); near La Rocha, NE slope of Sierra Mohinova, *Correll & Gentry 23109* (LL); Burro Canyon near Parral, *C. G. Pringle 13650* (ARIZ, CAS, GH, SMU, TEX, UC, US). Durango: Quebrada San Juan, ca 50 mi W of Durango and 23 mi NW of Los Coyotes Railroad, *A. Cronquist 9568* (NY, SMU, TEX, US); 6 mi W of La Ciudad, *D. Flyr 273* (TEX); ca 35 mi W of El Salto, *Gentry & J. Arguelles 18210* (US); San Ramon, *E. Palmer 60* (GH, NY, UC, US); 2.2 mi E of El Palmito, *Powell 1857* (SRSC, TEX); 12 mi W of La Ciudad, *S. Sikes & C. Babcock 380* (SRSC, TEX). Sinaloa: 0.9 mi W of El Palmito, ca 47 mi E of Concordia, *D. Breedlove 1721* (DS).

Perityle turneri belongs with a white-rayed alliance (8 spp.) of sect. *Perityle* (Powell, 1968) that is distributed mainly in mountain habitats from Durango, Mexico, to central Arizona. The species is related to *P. microcephala* A. Gray, *P. microglossa* Benth., and probably *P. linearilobа* Rydb., of the Sierra Madre Occidental in Durango and Chihuahua.

The distinguishing features of *P. turneri* include its decumbent to prostrate habit with lower stems often rooting at the nodes, leaf characters, capitulescence of 1–3(4) relatively large heads on peduncles (1.0–)2–6 cm long, ligules (3–)6–9 mm long, conical receptacles, and high-altitude habitat (7000–9500 ft.). The above four species are similar in characters of the disc corollas, achenes, and pappus.

All the specimens of *P. turneri* known to me were collected at relatively high altitudes in three general localities: (1) west of Ciudad Durango in the vicinity of El Salto and the Sinaloa border, (2) near San Ramon in west-central Durango, (3) and near Parral in southern Chihuahua. The plants from each of the three localities differ slightly in vegetative characteristics and head size, suggesting that the species as presently understood is polymorphic. I suspect that the taxon is actually widespread in suitable habitats of the Sierra Madre, but that isolated populations have been evolving independently for some time. Furthermore, distributional and morphological considerations suggest that *P. turneri* is primitive in the white-rayed alliance referred to above, and perhaps gave rise to its related species. The supposedly primitive characteristics of *P. turneri* include its large heads, long ligules, conical receptacles, perennial habit, and high-elevation distribution. The related species, indicated above, have small heads, short ligules (excepting *P. linearilobа*), and flattened receptacles. Both *P. microcephala* and *P. linearilobа* are bluff-dwelling perennials at intermediate elevations, while *P. microglossa* is an annual at lower altitudes. It is notable that specimens of the *Palmer 60* collection are somewhat intermediate morphologically between *P. microcephala* and other morphotypes of *P. turneri*.

The species is named for B. L. Turner who has made significant contributions to the systematics of Compositae, and who originally suggested *Perityle* to me as an interesting study. I am grateful to M. C. Johnston, of the University of Texas, Austin, for providing the Latin translation.

Amauria carterae Powell, sp. nov. Plantae humiles perennes, fasciculos 10 cm alt., 20 cm lat. efficientes; caules superiores dense minuteque glandiferi-puberuli; folia succulentia, basaliter dense aggregata, minute glandiferi-puberula, 1–2 cm long., 0.5–0.8 cm lat., subcruciformia, 3(5) segmenta maiora habentia, marginibus segmentorum lobos non profundos habentibus aut indentatis crispatisque; petioli 0.7–1.1 mf long.; capitulescentia e capitulis singulis in pedunculis 1–2 cm long. portatis admodum constantia; capitula 5–6 mm alt., ca 5 mm lat.; involucra campanulata; bracteae 5–6 mm long., 1.0–1.3 mm lat., oblanceolatae, non carinatae, admodum glabrae aut minute puberulae; flores radii ca 18, ligules oblongis ad subspathulatas 5.5–7.5 mm long., 2.0–2.5 mm lat.; discocorollae 3.0–3.5 mm long., faucibus tubulari-infundibuliformibus, ca 1.5 mm long., styli tenues, ca 1.6 mm long., in cacumen tenue angustati; achenia ca 1.5 mm long., linearia, faciebus glabris, marginibus pilis satis longis, parce ciliatis, pilis plerumque tortis crispatisve, aut satis antrorse

appressis; pappus carens; antherae ca 1.5 mm long., chromosomatum numerus **n** = ca **20.**

TYPE: MEXICO: Baja California Sur: Sierra de la Giganta, Cerro Mechudo, 600 m, ca Lat. 24° 55′ N, Long. 110° 45′ W, 21 Feb. 1970, *A. Carter 5439* (Holotype, UC).

Amauria carterae is the third species to be recognized for this Baja Californian genus, the others being *A. rotundifolia* Benth. and *A. brandegeana* (Rose) Rydb. The new species is known only from the type collection, but it is clearly distinct from the other Amaurias and from its closest relative, *A. rotundifolia.* Its most salient features include: low perennial habit; subcruciform leaves; achenes ca 1.5 mm long, with rather long, twisting or curling hairs on the margins, faces glabrous; bracts oblanceolate, thin, not keeled, essentially glabrous; capitulescence essentially of solitary heads; styles tapering to a fine point; leaves and young stems glandular-puberulent. I have grown seed progeny of *A. carterae* and the distinguishing characteristics are maintained in greenhouse plants.

I take pleasure in naming this species after Annetta Carter who found the plants while collecting for her proposed Sierra de la Giganta Flora, recognized the taxon as undescribed, and called it to my attention. I thank Hannah Croasdale for the Latin translation.

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Literature Cited

Powell, A. M. 1968. Additional discussions pertaining to the congeneric status of *Perityle* and *Laphamia* (Compositae). Sida 3:270–278.

NOTES AND NEWS

Stellate Epidermal Hairs, Some 10,000 Years Old.—The palaeontologists who worked in the Pleistocene of the Rancho La Brea pits naturally devoted their attention to the fossils of the gigantic animals entombed in the tar (Stock, Chester. 1930. Rancho La Brea, a record of the Pleistocene in California. Los Angeles County Museum of Natural History in California. Science Series 20; Palaeontology 11.). Recently, a new dig (28 x 28 x 10 ft deep) in the general area reveals abundant plant remains. Samples of tree trunks and branches, after detarring, were identified by the Forest Products Laboratory, Madison, Wisconsin, as juniper, cypress, redwood, and willow. In fragments of reticulate-veined leaves the epidermis consists of thick-walled cells with numerous guard cells, glands, and stellate hairs. The tapering cells of the hairs, six to ten in number and from twenty to fifty microns in length, are cutinised and thick-walled. The lumen is partially filled with the clear remains of protoplasm. In general form they resemble the epidermal hairs of a *Fremontodendron* or of a chinquapin *(Castanopsis).* The underlying cylindrical palisade and the lobed spongy mesophyll cells are thin-walled and protoplasm is also evident in the lumen of these cells. The results of these preliminary observations indicate the significance of the Pleistocene plant remains in the current Rancho La Brea dig. This vegetation differs markedly from that of the region today. The astounding structural preservation of the stellate epidermal hairs and of the leaf tissue in general present significant problems to palaeobotanists.—Flora Murray Scott, University of California, Los Angeles 90024.